

# ABSTRACT OF THE DISCLOSURE

A network relaying apparatus and method for routing and transferring packets at high speed. A transfer engine stores the packets received through a network interface in a packet buffer, and stores the header information in a header RAM. A search engine searches the transfer control information including the transfer destination information and the action information in accordance with the header information, and writes it in the header RAM. The transfer engine produces an output packet based on the information stored in the packet buffer and the header RAM and outputs it to the transfer destination. A switch switches the output packet to the routing process of the destination. The transfer engine executes the receiving process and the transmission process, and the search engine executes the input search process and the output search process. Each of these processes is executed by pipelining control using a required table independently.